

REMARKS

In the Office Action, claims 1 and 3-7 were allowed, claim 28 was indicated as allowable if rewritten in independent form, and claims 8-27 were rejected. Applicants thank the Examiner for allowing claims 1 and 3-7 and for indicating the allowability of claim 28. Claims 1 and 3-28 remain pending in the present application.

The previously indicated allowability of claims 8-15 and 22-27 was withdrawn in view of newly cited references. Applicants respectfully request reconsideration of claims 8-27 and ask that the rejection of these claims be withdrawn.

Claims 8-27 were rejected under 35 USC 103(a) as unpatentable over the Tubel et al. reference, US Patent No.: 6,201,489, in view of the McCoy reference, US Patent No.: 5,117,399. Applicants respectfully traverse this rejection. The cited references fail to disclose elements of the rejected claims. Accordingly, no prima facie case of obviousness has been established.

Various passages, teachings and figures of the cited references are set forth in the Office Action as support for the rejection of claims 8-27. However, Applicants respectfully submit these disclosures and teachings either fail to disclose elements of the subject claims or are characterized incorrectly. With respect to independent claims 8 and 22, for example, the Office Action states that the Tubel et al. reference discloses "reservoir pressure sensors (see col. 4, lines 1-20) in real to optimize production." (See Office Action, page 2). In fact, the Tubel et al. reference describes permanent downhole sensors "employed to provide information about discrete portions of strata surrounding the injection well". (See column 4, lines 3-8). The use of downhole sensors to obtain information from an injection well does not disclose or suggest real-time comparing or monitoring of reservoir pressure and bottom hole flowing pressure during production or proximate a production completion, as recited in independent claims 8 and 22 respectively. Neither the Tubel et al. reference nor the McCoy reference discloses or suggests these elements of the subject claims.

The Office Action further states the Tubel et al. reference "does not specifically disclose comparing the bottom hole flowing pressure and the reservoir pressure to determine an underbalance and adjusting the bottom hole pressure to maintain the level of underbalance in proximity to a maximum underbalance". (See Office Action, page 2). The McCoy reference is relied on as providing this teaching at column 1, lines 42-43. However, this assertion is incorrect, because the McCoy reference teaches against adjusting the bottom hole flowing pressure to maintain the level of underbalance in proximity to or at a desired position relative to a predetermined maximum underbalance or maximum pressure ratio underbalance. The McCoy reference actually teaches that "bottom hole pressure should be maintained at a minimum value compared to the reservoir pressure in order to obtain the maximum production from the well" (*emphasis added*) (see column 1, lines 41-43). The present application and subject claims veer sharply away from the McCoy approach to avoid the sanding and other formation degradation that can result from maintaining the bottom hole pressure at a minimum value compared to the reservoir pressure to maximize production.

Accordingly, the cited references, whether taken alone or in combination, fail to disclose elements of the subject claims. By way of specific example, the references fail to disclose or suggest comparing a bottom hole flowing pressure to a reservoir pressure in real-time "to determine an underbalance as a fluid is produced from the formation" as recited in independent claim 8. The references also fail to disclose or suggest continuously adjusting the bottom hole flowing pressure "to maintain the level of underbalance in proximity to a predetermined maximum underbalance" as recited in independent claim 8. Similarly, the references fail to disclose or suggest monitoring in real-time a reservoir pressure of the formation and the bottom hole flowing pressure "proximate a production completion" as recited in independent claim 22. The references also fail to disclose or suggest periodically adjusting the ratio of bottom hole flowing pressure to reservoir pressure "to maintain the ratio at a desired position relative to a predetermined line representative of the maximum pressure ratio underbalance" as recited in independent claim 22. Accordingly, no prima facie case of obviousness has been established with respect to independent claims 8 and 22, and the rejection of those claim should be withdrawn.

With respect to independent claim 16, the Office Action states that the Tubel et al. reference discloses a system for optimizing production comprising a completion deployed in a wellbore having a flow control device and cites "(fig. 2, at 114, and fig. 3, at 214)" of the Tubel et al. reference as support. The Tubel et al. reference is further relied on as disclosing "a reservoir pressure sensor (see col. 4, lines 1-20)". (See Office Action, page 3). However, the reservoir pressure sensor is described for use with an injection well. As discussed above, the Tubel et al. reference actually describes permanent downhole sensors "employed to provide information about discrete portions of strata surrounding the injection well". (See column 4, lines 3-8). The use of downhole sensors in the Tubel et al. system to obtain information from an injection well does not disclose or suggest combining a reservoir pressure sensor and a completion deployed in a wellbore with a flow control mechanism to control production of fluid as recited in independent claim 16. Neither the Tubel et al. reference nor the McCoy reference discloses or suggests these elements of claim 16.

The Office Action further states the Tubel et al. reference "does not disclose a stability envelope to maintain a level of underbalance in proximity to a predetermined optimal underbalance ". (See Office Action, page 3). The McCoy reference is relied on as providing this teaching at column 1, lines 42-43. As discussed above, this assertion is incorrect, because the McCoy reference teaches that "bottom hole pressure should be maintained at a minimum value compared to the reservoir pressure in order to obtain the maximum production from the well" (see column 1, lines 41-43). The McCoy approach of maintaining the bottom hole pressure at a minimum value compared to the reservoir pressure is an entirely different production approach that may be susceptible to problems overcome by the presently claimed system. The McCoy reference simply does not disclose or suggest the use of a stability envelope for the formation such that the ratio of bottom hole flowing pressure to reservoir pressure can be adjusted within the stability envelope to maintain a level of underbalance in proximity to a predetermined optimal underbalance, as recited in independent claim 16.

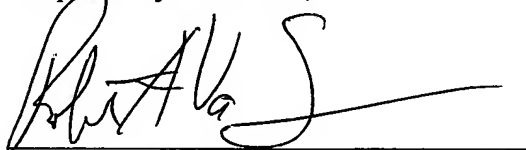
Accordingly, the cited references, whether taken alone or in combination, fail to disclose or suggest elements of claim 16. By way of specific example, the references fail to disclose or suggest a completion deployed in a wellbore with a flow control mechanism "to control the rate

at which a fluid is produced through the wellbore" combined with "a reservoir pressure sensor" and a "stability envelope for the formation, wherein the flow control mechanism is adjustable to continuously adjust the ratio of bottom hole flowing pressure to reservoir pressure within the stability envelope to maintain a level of underbalance in proximity to a predetermined optimal underbalance" as recited in independent claim 16. Accordingly, no prima facie case of obviousness has been established with respect to independent claim 16, and the rejection of this claim should be withdrawn.

Claims 9-15, 17-21 and 23-27 ultimately depend from one of the independent claims discussed above, and the rejection of these claims also should be withdrawn. No prima facie case of obviousness has been established with respect to independent claims 8, 16 or 22. Consequently, the dependent claims are patentable over the cited references for the reasons provided with respect to the independent claims and for the additional elements recited in the subject dependent claims.

In view of the foregoing remarks, all pending claims are believed to be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'R. A. Van Someren', written over a horizontal line.

Robert A. Van Someren
Reg. No. 36,038

Date: December 19, 2006

PO Box 2107
Cypress, TX 77410-2107
Voice: (281) 373-4369